

Luca Consolini

List of Publications by Year in descending order

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85
papers

1,410
citations

516710

16
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345221

36
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86
all docs

86
docs citations

86
times ranked

1209
citing authors

#	ARTICLE	IF	CITATIONS
1	Leader-follower formation control of nonholonomic mobile robots with input constraints. <i>Automatica</i> , 2008, 44, 1343-1349.	5.0	567
2	Virtual Holonomic Constraints for Euler-Lagrange Systems. <i>IEEE Transactions on Automatic Control</i> , 2013, 58, 1001-1008.	5.7	95
3	Path following for the PVTOL aircraft. <i>Automatica</i> , 2010, 46, 1284-1296.	5.0	80
4	Stabilization of a Hierarchical Formation of Unicycle Robots with Velocity and Curvature Constraints. <i>IEEE Transactions on Robotics</i> , 2009, 25, 1176-1184.	10.3	48
5	A Geometric Characterization of Leader-Follower Formation Control. <i>Proceedings - IEEE International Conference on Robotics and Automation</i> , 2007, , .	0.0	42
6	A Minimum Phase Output in the Exact Tracking Problem for the Nonminimum Phase Underactuated Surface Ship. <i>IEEE Transactions on Automatic Control</i> , 2012, 57, 3174-3180.	5.7	37
7	Active Filter for the Removal of the DC Current Component for Single-Phase Power Lines. <i>IEEE Transactions on Industrial Electronics</i> , 2013, 60, 4403-4414.	7.9	34
8	Learning control in spatial coordinates for the path-following of autonomous vehicles. <i>Automatica</i> , 2014, 50, 1867-1874.	5.0	34
9	Dynamic virtual holonomic constraints for stabilization of closed orbits in underactuated mechanical systems. <i>Automatica</i> , 2018, 94, 112-124.	5.0	30
10	Optimal Time-Complexity Speed Planning for Robot Manipulators. <i>IEEE Transactions on Robotics</i> , 2019, 35, 790-797.	10.3	27
11	On the VTOL Exact Tracking With Bounded Internal Dynamics via a Poincaré Map Approach. <i>IEEE Transactions on Automatic Control</i> , 2007, 52, 1757-1762.	5.7	26
12	An optimal complexity algorithm for minimum-time velocity planning. <i>Systems and Control Letters</i> , 2017, 103, 50-57.	2.3	26
13	Generalized bang-bang control for feedforward constrained regulation. <i>Automatica</i> , 2009, 45, 2234-2243.	5.0	21
14	On a Class of Hierarchical Formations of Unicycles and Their Internal Dynamics. <i>IEEE Transactions on Automatic Control</i> , 2012, 57, 845-859.	5.7	21
15	Control of a bicycle using virtual holonomic constraints. <i>Automatica</i> , 2013, 49, 2831-2839.	5.0	21
16	On the exact tracking of the spherical inverted pendulum via an homotopy method. <i>Systems and Control Letters</i> , 2009, 58, 1-6.	2.3	18
17	A path following problem for a class of non-holonomic control systems with noise. <i>Automatica</i> , 2005, 41, 1009-1016.	5.0	16
18	When is a Lagrangian Control System With Virtual Holonomic Constraints Lagrangian?. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2013, 46, 512-517.	0.4	14

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19	Path following of car-like vehicles using dynamic inversion. International Journal of Control, 2003, 76, 1724-1738.	1.9	13
20	Virtual Holonomic Constraints for Euler-Lagrange Systems. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2010, 43, 1193-1198.	0.4	13
21	Multi-optimization of β -splines for autonomous parking. , 2011, , .		13
22	Spatio-temporal symmetries in control systems: an application to formation control. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 779-784.	0.4	12
23	On the complexity of quadratic programming with two quadratic constraints. Mathematical Programming, 2017, 164, 91-128.	2.4	11
24	Algebraic solution to minimum-time velocity planning. International Journal of Control, Automation and Systems, 2013, 11, 805-814.	2.7	10
25	Space-learning tracking control for permanent magnet step motors. Automatica, 2016, 73, 223-230.	5.0	9
26	Minimum-time control of flexible joints with input and output constraints. Proceedings - IEEE International Conference on Robotics and Automation, 2007, , .	0.0	8
27	On the Existence of Small Periodic Solutions for the 2-Dimensional Inverted Pendulum on a Cart. SIAM Journal on Applied Mathematics, 2007, 68, 486-502.	1.8	7
28	Adjacency Matrix-Based Transmit Power Allocation Strategies in Wireless Sensor Networks. Sensors, 2009, 9, 5390-5422.	3.8	7
29	Flexible joints control: A minimum-time feed-forward technique. Mechatronics, 2009, 19, 348-356.	3.3	7
30	Minimum-time constrained velocity planning. , 2009, , .		7
31	Control of a bicycle using virtual holonomic constraints. , 2010, , .		7
32	Optimized feedforward control of propofol for induction of hypnosis in general anesthesia. Biomedical Signal Processing and Control, 2021, 66, 102476.	5.7	7
33	Further Results on Virtual Holonomic Constraints. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 84-89.	0.4	6
34	Minimum-time feedforward control of an open liquid container. , 2013, , .		6
35	On the Lagrangian structure of reduced dynamics under virtual holonomic constraints. ESAIM - Control, Optimisation and Calculus of Variations, 2017, 23, 913-935.	1.3	6
36	Time-optimal velocity planning by a bound-tightening technique. Computational Optimization and Applications, 2018, 70, 61-90.	1.6	6

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37	A solution of the minimum-time speed planning problem based on lattice theory. Journal of the Franklin Institute, 2020, 357, 7617-7637.	3.4	6
38	A morphing method for exact tracking control of nonminimum phase non linear systems. , 2007, , .		5
39	On the swing-up of the Pendubot using virtual holonomic constrains. , 2011, , .		5
40	Static output feedback of equivariant linear systems with applications to the control of interconnected agents. , 2014, , .		5
41	A Jacobi-like acceleration for dynamic programming. , 2016, , .		5
42	Minimum-time feedforward control for industrial processes. , 2007, , .		4
43	A continuation theorem on periodic solutions of regular nonlinear systems and its application to the exact tracking problem for the inverted spherical pendulum. Nonlinear Analysis: Theory, Methods & Applications, 2011, 74, 9-26.	1.1	4
44	Graph-based algorithms for the efficient solution of optimization problems involving monotone functions. Computational Optimization and Applications, 2019, 73, 101-128.	1.6	4
45	Convergence Analysis of Spatial-Sampling-Based Algorithms for Time-Optimal Smooth Velocity Planning. Journal of Optimization Theory and Applications, 2020, 184, 1083-1108.	1.5	4
46	A Graph-Based Algorithm for Optimal Control of Switched Systems:An Application to Car Parking. IEEE Transactions on Automatic Control, 2021, 66, 6049-6055.	5.7	4
47	Minimum-time feedforward control with input and output constraints. , 2006, , .		4
48	How to find a minimum phase output in the exact tracking problem for the nonminimum phase underactuated surface ship. , 2010, , .		3
49	Modeling and stability analysis of an active filter for DC current compensation. , 2011, , .		3
50	Minimum-time rest-to-rest feedforward action for PID feedback MIMO systems. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 217-222.	0.4	3
51	Learning control in spatial coordinates for the path-following of autonomous vehicles. , 2013, , .		3
52	A Gaussâ€“Newton Method for the Synthesis of Periodic Outputs With Central Pattern Generators. IEEE Transactions on Neural Networks and Learning Systems, 2014, 25, 1394-1400.	11.3	3
53	On the distributed stabilization and consensus of symmetrically interconnected agents. , 2015, , .		3
54	A Multigraph-Based Selective Update Method for the Efficient Solution of Dynamic Programming. , 2018, , .		3

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55	A nonlinear dynamic inversion computational approach applied to the exact tracking problem for the spherical pendulum. , 2008, , .		2
56	Recursive convex replanning for the trajectory tracking of wheeled mobile robots. , 2010, , .		2
57	Non-rigid formations of nonholonomic robots. , 2010, , .		2
58	A nonlinear Reactor for DC Current Compensation in Single Phase Power Lines. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 12273-12278.	0.4	2
59	Synthesis of virtual holonomic constraints for 3-DOF mechanical systems. , 2013, , .		2
60	A Consensus Approach to Dynamic Programming. IFAC-PapersOnLine, 2017, 50, 8435-8440.	0.9	2
61	Efficient local search procedures for quadratic fractional programming problems. Computational Optimization and Applications, 2020, 76, 201-232.	1.6	2
62	Structured identification for network reconstruction of RC-models. Systems and Control Letters, 2021, 147, 104849.	2.3	2
63	A Sequential Algorithm for Jerk Limited Speed Planning. IEEE Transactions on Automation Science and Engineering, 2022, 19, 3192-3209.	5.2	2
64	Steering hierarchical formations of unicycle robots. , 2007, , .		1
65	An algorithm for minimum-time feedforward control based on convexity. , 2007, , .		1
66	An homotopy method for exact tracking of nonlinear nonminimum phase systems: The example of the spherical inverted pendulum. , 2009, , .		1
67	Iterative output replanning for flat systems affected by additive noise. , 2010, , .		1
68	Modeling and analysis of a DC current compensator in distribution power lines. , 2011, , .		1
69	Spatio-temporal symmetries in linear control systems with an application to formation control. , 2013, , .		1
70	Induced connections on virtual holonomic constraints. , 2015, , .		1
71	Synthesis of virtual holonomic constraints for obtaining stable constraint dynamics. Automatica, 2018, 93, 262-273.	5.0	1
72	Optimizing cooperative pallet loading robots: A mixed integer approach. IEEE Robotics and Automation Letters, 2021, , 1-1.	5.1	1

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73	On the exact tracking of the spherical inverted pendulum via an homotopy method. , 2008, , .		0
74	On the internal dynamics of formations of unicycle robots. , 2010, , .		0
75	On the Swing-Up of the Pendubot Using Virtual Holonomic Constrains. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 9290-9295.	0.4	0
76	A sufficient condition for dichotomy based on a suitable invariance property. Journal of Differential Equations, 2011, 251, 1475-1488.	2.2	0
77	Synchronizing N cart-pendulums using virtual holonomic constraints. , 2012, , .		0
78	Hermite Polynomials for Iterative Output Replanning for Flat Systems Affected by Additive Noise. Asian Journal of Control, 2013, 15, 292-301.	3.0	0
79	Synthesis of virtual holonomic constraints with stable constraint dynamics. , 2015, , .		0
80	Impact of different auto-scaling strategies on adaptive Mobile Cloud Computing systems. , 2016, , .		0
81	Solving the Minimum-Time Velocity Planning Problem through an Hypergraph-Based Approach. IFAC-PapersOnLine, 2017, 50, 10638-10643.	0.9	0
82	A Convex Optimization Approach for Equivariant Control Systems. IEEE Transactions on Automatic Control, 2019, 64, 3846-3852.	5.7	0
83	Fast numerical solution of optimal control problems for switched systems: An application to path planning. , 2020, , .		0
84	Optimized Reference Signal for Induction of General Anesthesia with Propofol. IFAC-PapersOnLine, 2021, 54, 7-12.	0.9	0
85	Optimized robust combined feedforward/feedback control of propofol for induction of hypnosis in general anesthesia. , 2021, , .		0